ABSTRACT OF THE DISCLOSURE

A fiber-pigtailed assembly for an optical detector with low back reflection and minimal polarization-dependent responsivity has a detector surface mounted adjacent a beveled end of a fiber pigtail such that the detector surface is tilted and rotated with respect to the beveled end of the fiber pigtail. Also an external optical fiber may be coupled to the fiber pigtail with low back reflection and minimal polarization-dependent responsivity by having an input ferrule at the end of the external optical fiber, the end being beveled; by having an intermediate ferrule at a coupling end of the fiber pigtail, the coupling end being beveled while the other end of the ferrule is beveled by the same amount but approximately orthogonal to the coupling end; and by having an output ferrule on the fiber pigtail adjacent to the intermediate ferrule, the end of the output ferrule adjacent to the intermediate ferrule being beveled. The ferrules are maintained in position so that the beveled ends of the intermediate ferrule are parallel to the corresponding beveled ends of the input and output ferrules and there is a gap between the input and intermediate ferrules. The beveled ends of the ferrules at both the coupler and detector ends of the fiber pigtail introduce fixed amounts of polarization-dependent responsivity while reducing back reflection, while the tilt of the detector surface at the detector end and the opposite approximately orthogonal bevel of the intermediate ferrule at the coupler end compensate and essentially eliminate such polarization-dependent responsivity.